

Supporting Information

Cu₂ZnSnS₄ Nanoparticle Sensitized Metal-Organic Framework Derived Mesoporous TiO₂ as Photoanodes for High Performance Dye Sensitized Solar Cells

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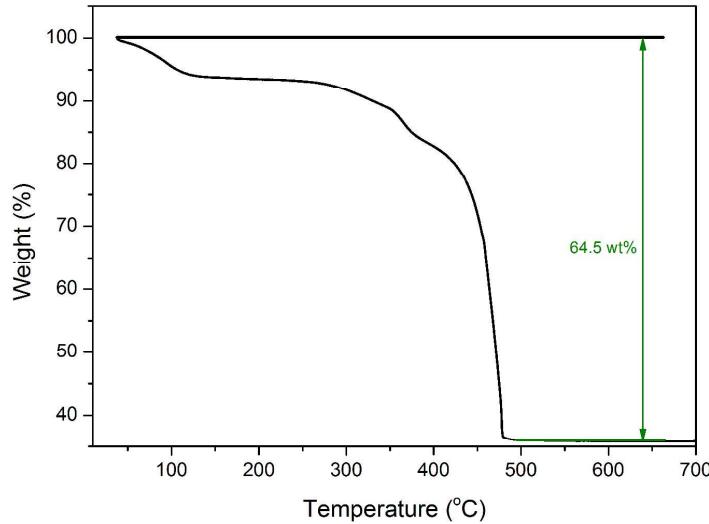


Fig. S1 TGA for MIL-125(Ti) at a heating rate of $10\text{ }^{\circ}\text{C min}^{-1}$ from 10 to $700\text{ }^{\circ}\text{C}$

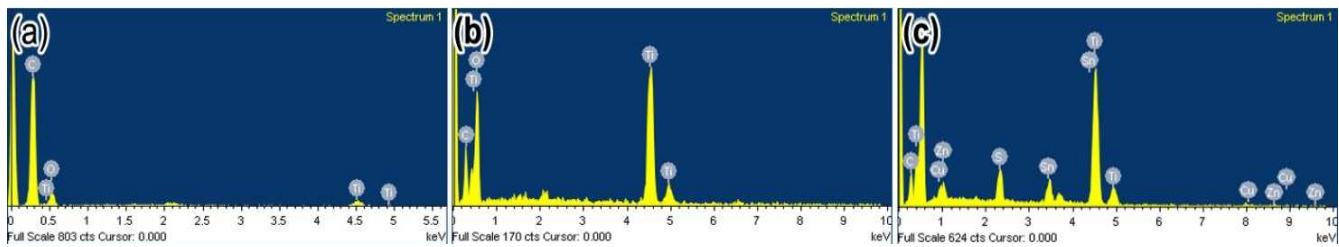


Fig. S2 EDS spectra of (a) MIL-125(Ti) (as synthesized), (b) MOFs-derived TiO_2 , and (c) 1CZTS/ TiO_2

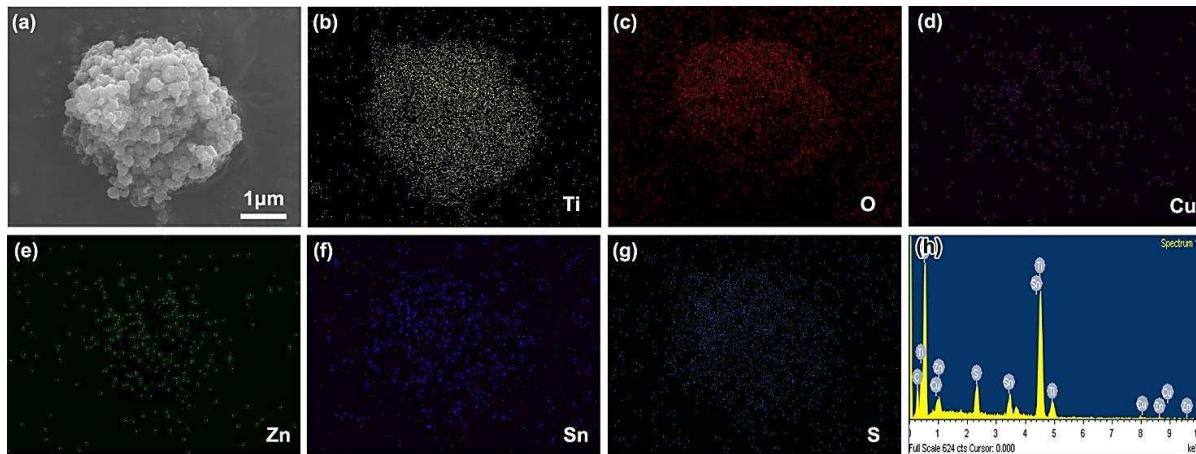


Fig. S3 EDS elemental mapping images of 1CZTS/ TiO_2 .

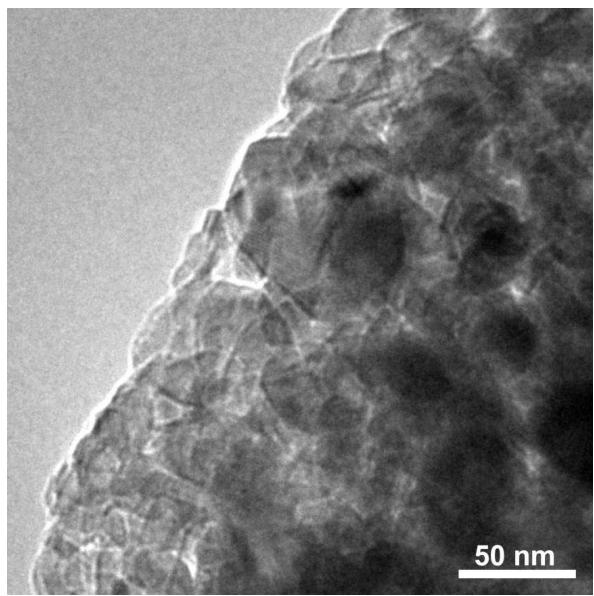


Fig. S4 Surface TEM image of the MOFs-derived TiO_2

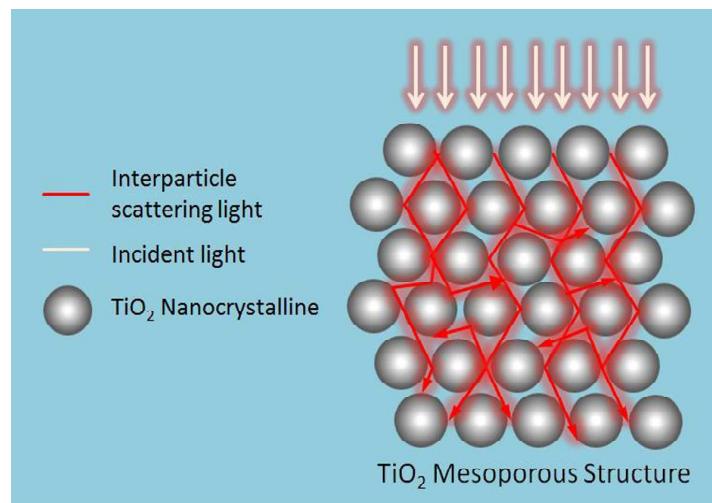


Fig. S5 Illustration of CZTS/ TiO_2 multiple interparticle light-scattering processes

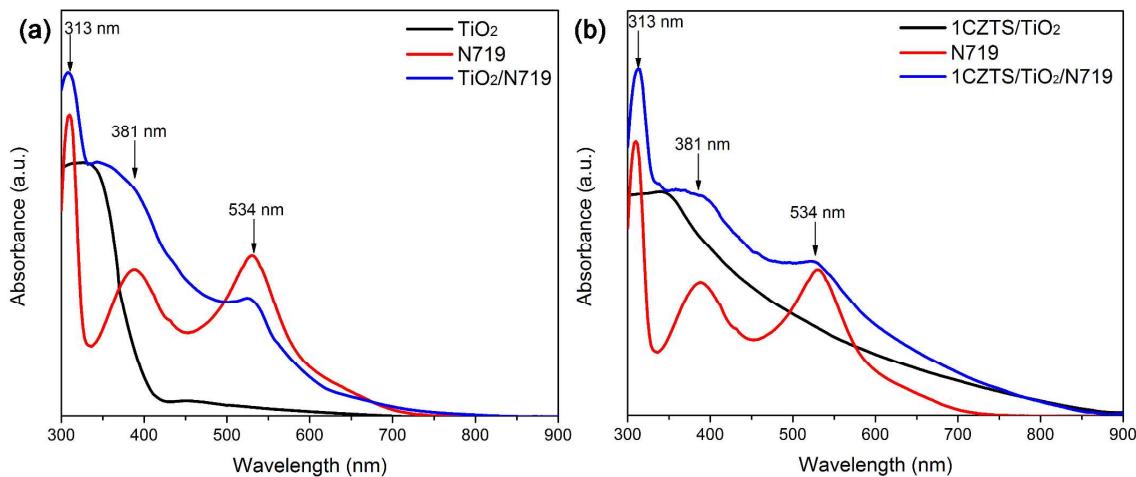


Fig. S6 Absorption spectra of (a) N719, MOFs-derived TiO_2 and $\text{TiO}_2/\text{N719}$, (b) 1CZTS/ TiO_2 and 1CZTS/ $\text{TiO}_2/\text{N719}$ samples

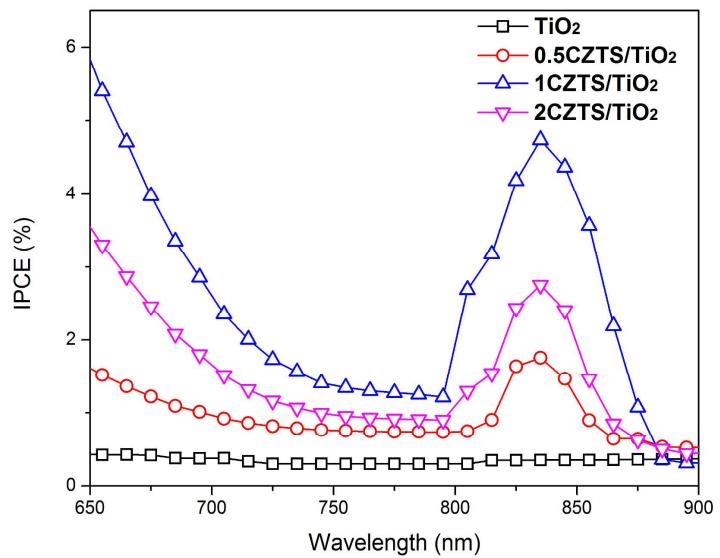


Fig. S7 IPCE spectra of DSSCs based on samples of MOFs-derived TiO_2 and CZTS/ TiO_2 with different CZTS contents tested under the incident light region of 650-900nm